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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,975	11/21/2003	Glenn L. Beane	15344/69391E	1755

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DEVINE, MILLIMET & BRANCH, P.A.
111 AMHERST STREET
BOX 719
MANCHESTER, NH 03105

EXAMINER	
MAI, NGOCLAN THI	
ART UNIT	PAPER NUMBER
1793	

MAIL DATE	DELIVERY MODE
04/22/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/719,975	BEANE, GLENN L.	
	Examiner	Art Unit	
	NGOCLAN T. MAI	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 March 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-13,56 and 58-62* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *13,56 and 58-62* is/are allowed.

6)☒ Claim(s) *1-6,11 and 12* is/are rejected.

7)☒ Claim(s) *8-10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

Claims 1-6, 8-13, 56, and 58-62 are currently under examination, wherein claims 13 and 56 are currently amended in applicant's amendment filed on 3/29/2010. Claim 57 has been cancelled in the same amendment.

Upon further consideration the finality of the last office action is withdrawn and claims 1-6, 11-12 are now rejected for the following reason.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-6, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hermes in view of Lashmore (previous used in office action dated 5/29/2009).

Regarding claims 1 and 11 Hermes discloses hydraulic press for compression of powder having upper punch, lower punch and die; the upper punch and lower punch being movable relative to each other for press operation and the relative motion being provided by means of first and second pistons respectively connected to the upper and lower punches and respectively moving in first and second cylinders having hydraulic conduit means interconnecting the two cylinders. See claim 1. Hermes teaches providing a controlled valve to bleed or branch off part of the flow of control liquid flowing between the cylinders in which run pistons for controlling the position of the upper punch and lower punch or die. See column 1, lines 40-45. Hermes also teaches three valves, I, II, III control application of pressure and connection of venting outlet to the piston chambers at opposite sides of the pistons and hydraulic pump H provides pressure fluid into various conduits and driven by a suitable motor M. See column 2, lines 16-22.

Hermes therefore discloses the controlling a pressing of powder material in the die by controlling a pressure fluid provided to the pistons that are operatively associated with the workpiece forming punches which inherently controls a magnitude of a pressing force applied by the workpiece-forming punches and by controlling a position of the working punches relative to the die.

Hermes differs from the claim in that Hara or Hermes does not teach controlling an introduction of a powder material into a die and controlling a creation of a substantially uniform distribution of powder material in the die.

Lashmore discloses a method for uniform delivery a quantity of particulate material into a die cavity of a powder press for compacting. The method also provides (column 1, lines 18-32) a uniform density distribution of the particles throughout the die cavity.

Since Lashmore teaches in the same field of endeavor it would have been obvious to one skilled in the art to include the step of delivering particulate material taught by Lashmore by controlling the weight of the particulate material and fluidizing it once inside the cavity in the method of pressing powder of Hermes in order to provide uniform density distribution of the particulate material before compacting.

Regarding claim 2, the providing a uniform density is carried out by predetermined constant weight of particulate material into the die cavity. See column 4, lines 28-40 and column 8, lines 28-37).

Regarding claim 3 Lashmore also teaches (column 9, lines 17-22) delivery different material or multiplicity of alloy of different composition to make functionally graded alloys.

Regarding claim 4 Lashmore further teaches (column 12, lines 7-10) the powder feed system can be used in any known powder press manufacture process and can also be temperature controlled. As for claim 6, Lashmore discloses (column 12, lines 10-13) the temperature controlled can be carried out by heating with convection or induction, microwave system or heat transfer method that pump oil or hot water through pipe or coils.

Regarding claim 5 Lashmore also discloses (column 4, lies 8-14, column 5, lines 38-50 and column 8, lines 38-41) uniformly distributing particulate material throughout all regions of a die cavity by operating to fluidize the particulate material once it is situated inside the die cavity.

As for claim 12, Hermes in view of Lashmore do not specifically teach after pressing completion gradually reducing the pressing force applied by each of at least one set of workpiece-forming punches while maintaining the workpiece forming punches in a substantially fixed position such that the finished part is fully supported at all times prior to ejection. However such modification would have been obvious since pressing force applied by the punches must be reduced while the part is remained in the die before injecting part in order to provide support for the part.

Response to Arguments

Applicant's amendment filed 3/29/2010 have been fully considered.

The previous rejections to claims 13 and 56 have been withdrawn in light of applicant's amendment filed 3/29/2010.

Regarding claims 1-6, 11 and 12 the claims were previous rejected as being unpatentable over Hermes in view of Lashmore in office action dated 5/29/2009 and the rejection was dropped

during the subsequence office action due to misinterpretation of the references. However after careful further consideration, the claims are now rejected as explained in detail in the rejection above. This office action has been made non-final since the rejection made on that date was not argued.

Claims 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 13, 56, 58-62 are allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NGOCLAN T. MAI whose telephone number is (571)272-1246. The examiner can normally be reached on 8:30-5:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Roy King/
Supervisory Patent Examiner, Art Unit 1793

n.m.